FILE

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES S. ALLEN,
THERESA L. MEYER and KENNETH D. WAGNER

Appeal No. 96-1982
Application 07/953,396[1]

ON BRIEF

Before HAIRSTON, BARRETT and FLEMING, *Administrative Patent Judges.*

FLEMING, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 3 through 5, and 7 through 10. Claims 2 and 6 have been cancelled.

The invention is directed to simulation of fault-free and fault conditions of a circuit for evaluating circuit testing methods.

[1] Application for patent filed September 29, 1992.

The independent claim 1 is reproduced as follows:

1. A method of simulating detection of faults in a digital circuit comprising the steps of:

defining a logical probe for nets to be measured, for conditions to be satisfied before a measurement of the nets can be made, and for providing a duration of a time-limited measurement window during which said measurement takes place;

simulating operation of the circuit for fault-free and faulty operation;

monitoring for a satisfaction of the defined conditions to be satisfied before measurement can be made;

measuring net values for the nets to be measured upon the satisfaction of the defined conditions during fault-free and faulty operation of the circuit; and

recording a fault-free value and a list of faults which can be detected.

The Examiner relies on the following references:

Smith et al. (Smith)	4,868,770	Sep. 19, 1989

In the Examiner's final rejection, the Examiner rejected claims 1, 3 through 5, and 7 through 10 under 35 U.S.C. § 103 as being unpatentable over Smith.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the brief and answer for the respective details thereof.

OPINION

We will not sustain the rejection of claims 1, 3 through 5, and 7 through 10 under 35 U.S.C. § 103.

The Examiner has failed to set forth a prima facie case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. *See In re Sernaker*, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." *Para-Ordnance Manufacturing v. SGS Importers International*, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239, (Fed. Cir. 1995) *citing W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Appellants argue on pages 4 and 5 of the brief that Smith does not teach a method or means having the following limitations:

"'defining a logical probe for nets to be measured, conditions to be satisfied before a measurement of the nets can be made, and

providing a duration of a time-limited measurement window during which said measurement take place';
'simulating operation of the circuit for fault-free and faulty operation';
'measuring values of the nets after satisfaction' of predefined condition; or
'recording fault-free values' and faulty values."
Appellants argue that each of these limitations is recited in each of the independent claims and is not taught or suggested by Smith.

On page 5 of the answer, the Examiner argues that Smith discloses defining a logical probe in column 3, lines 26-35 and in column 5, lines 9-27 but admits that Smith does not specifically disclose measuring net values and recording a duration based on a time-limited measurement window. The Examiner argues that it would have been obvious to one skilled in the art to modify Smith by providing an IF-THEN statement to only record a certain period of time when a certain condition was met. The Examiner argues on pages 5 and 6 of the answer that such an expression would have been obvious to one skilled in the art "because one would not want to save 'useless' data, such as that occurring before some event, when one was concerned with what happened to the system after the event occurred."

The Federal Circuit has stated that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84, (Fed. Cir. 1992), *citing In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Turning to Smith, we note that Smith expressly teaches in column 5, lines 28-40 that by defining an event such as when a resistor would have been damaged by dissipation of too much power and thereby halting the simulation, an enhancement results where costly errors are avoided without incurring costly simulation runs. Smith further teaches in column 6, lines 13-18, that to control the simulation by, for example, halting the simulation upon the occurrence of a user-defined event greatly enhanced simulation results. Although Smith does disclose the halting of simulation runs as an example, Smith does not provide any other suggestion of ways to control the simulation. Certainly, we fail to find any suggestion to provide a duration of a time-limited measurement window or conditions to be satisfied before a measurement of the nets can be made. Smith only teaches providing measurement until a condition occurs and then the simulation should be halted. We do not find any suggestion in Smith to modify the Smith simulation system to provide the above Appellant's claimed limitations.

"Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." *Para-Ordnance Manufacturing v. SGS Importers International*, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995) *citing W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

We have not sustained the rejection of claims 1, 3 through 5 and 7 through 10 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

KENNETH W. HAIRSTON)
Administrative Patent Judge)
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